

# ALL-FLAG OFFICERS CONFERENCE



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12 MARCH 2002

# Where Are We?

*In the last five  
years (FY97-02),  
mishaps cost the  
Navy \$3.84*

*BILLION and  
174 Sailors and Marines died in  
FY01*

*1,064 killed  
94 Sailors and Marines died this  
fiscal year\**

*Indirect costs?*



*\*As of 5 Mar 02*



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# Cost and Deaths

## Navy and Marine Corps

### FY97-02\*

#### Cost

*In Millions*

■ Shore/Ground ■ Afloat ■ PMV ■ Recreation ■ Aviation

**Aviation:**  
**\$3.137B**

**Recreation**  
**: \$61M**

**PMV:**  
**\$133**

**M**

**Afloat:**

**\$368**  
**M**

**Shore/Ground/Op MV:**  
**\$144M**

**Total: \$3.84B**

#### Deaths

■ Shore/Ground ■ Afloat ■ Traffic ■ Recreation ■ Aviation

**Traffic: 619**

**Afloat:**  
**19**

**Shore/**  
**Ground:**  
**133**

**Aviation:**  
**151**

**Recreation:**  
**142**

**Total Deaths: 1,064**

**\*As of 5 Mar 02**



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# Human Error

**FY97-02\***

## No. of Class-A Mishaps

## Human Error

Navy/Marine  
Aviation\*

140 of 166

HE 84%

Non-HE  
16%

\*FY97-01  
F/FR/AGM

Navy Afloat

41 of 50

HE 82%

Non-HE  
18%

Navy Operational Shore

36 of 48

HE 75%

Non-HE  
25%

Navy PMV

293 of 346

HE 85%

Non-HE  
15%

**\*As of 5 Mar 02**



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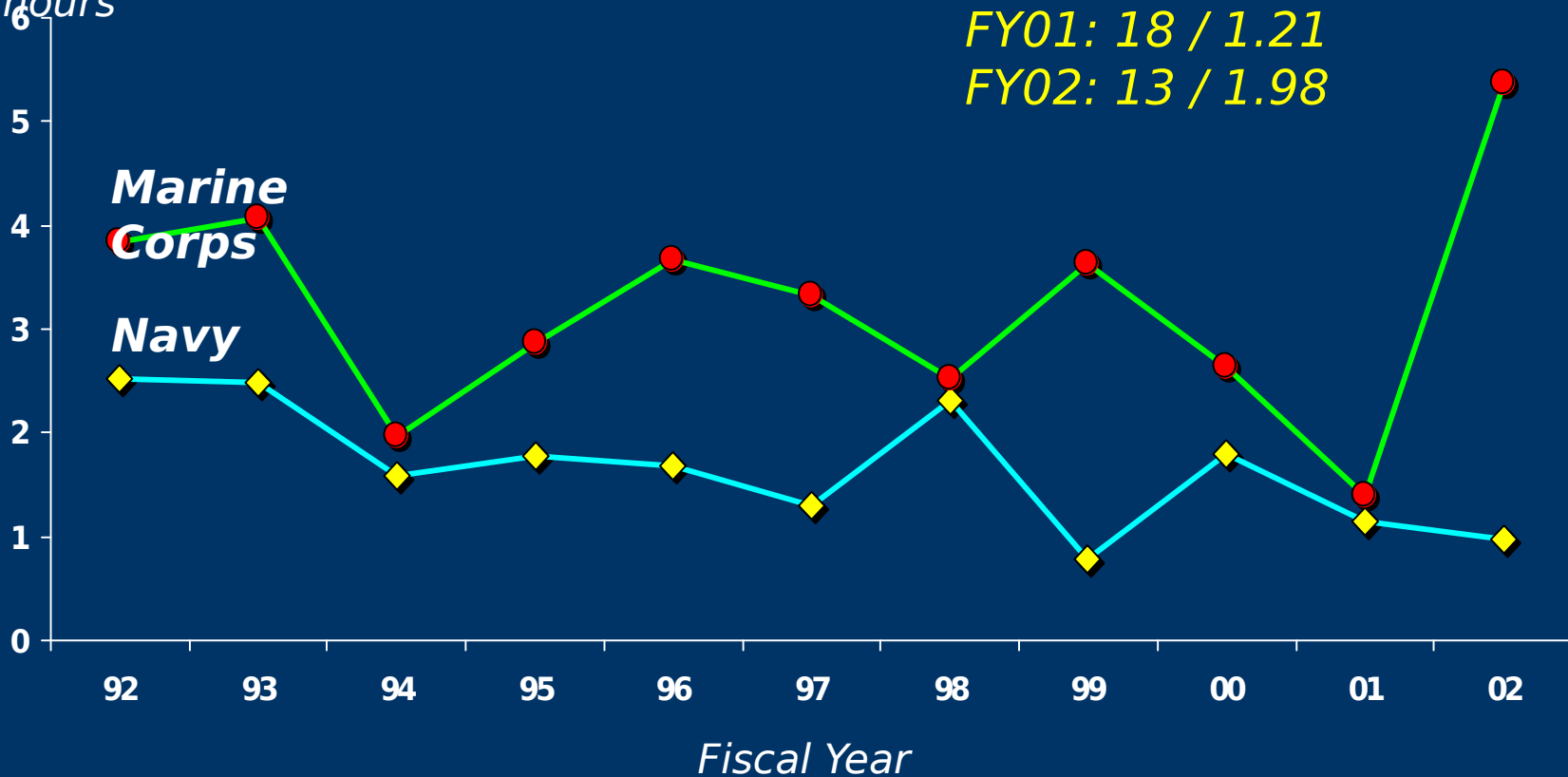


# Class-A Flight Mishap Rates\*

## Navy and Marine Corps

Mishap rates per 100,000 flight hours

Navy/Marine  
FY00: 29 / 1.99  
FY01: 18 / 1.21  
FY02: 13 / 1.98



\*As of 5 Mar 02



# Aviation

## TRENDS

### Mishap

### Investigations

- *Human error (aircrew):*  
*Leading causal factor*
  - Skill-based errors
  - CRM failures
  - Violations

### Surveys

- *Manning/inexperience*
- Training  
quality/quantity
- NATOPS/technical pubs
- Cannibalization rates  
up

## TAKEAWAYS

- *Fund state-of-art simulators and data centric systems*
- Improve training
- Increase proficiency
- Institutionalize ORM
- Enforce standards
- Increase checks and balances



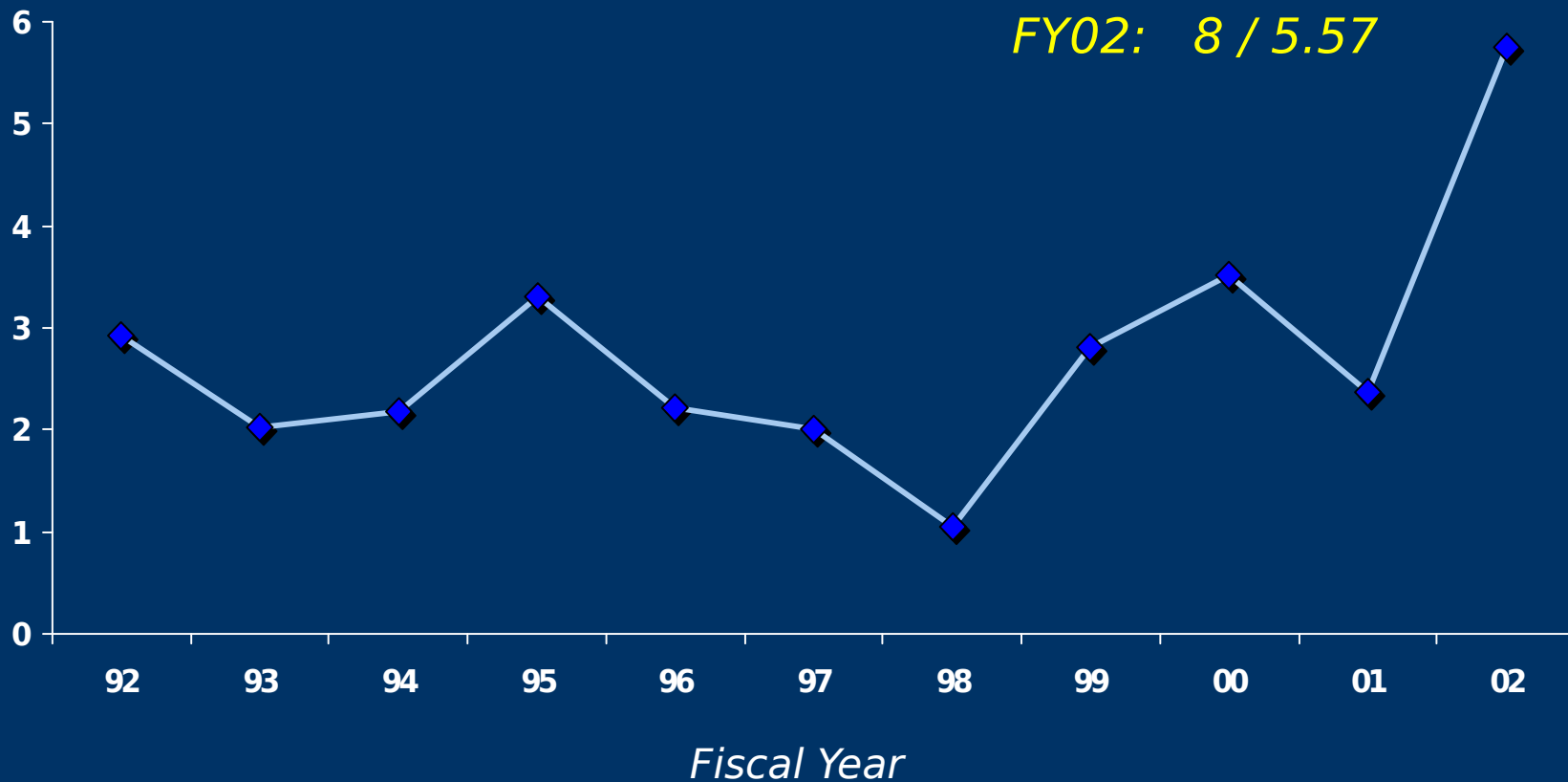
# Navy Afloat Class-A Mishap Rates\*

FY00: 12 / 3.51

FY01: 8 / 2.37

FY02: 8 / 5.57

Mishap rates per 100 ships per year



**\*As of 5 Mar 02**



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# Afloat



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## TRENDS

### Mishap Investigations

- *Inadequate supervision*
- Poor PMS
- Poor CRM
- Poor situational awareness
- Complacency

### Surveys

- *Poor leadership, supervision*
- Poor PMS
- Weak self-assessment capability
- Ineffective training

## TAKEAWAYS

- *Leadership commitment*
- Enforce standards
- Increase checks and balances
- Institutionalize ORM
- Demand risk assessments
- Improve/standardize navigation technology
- Increase simulator training



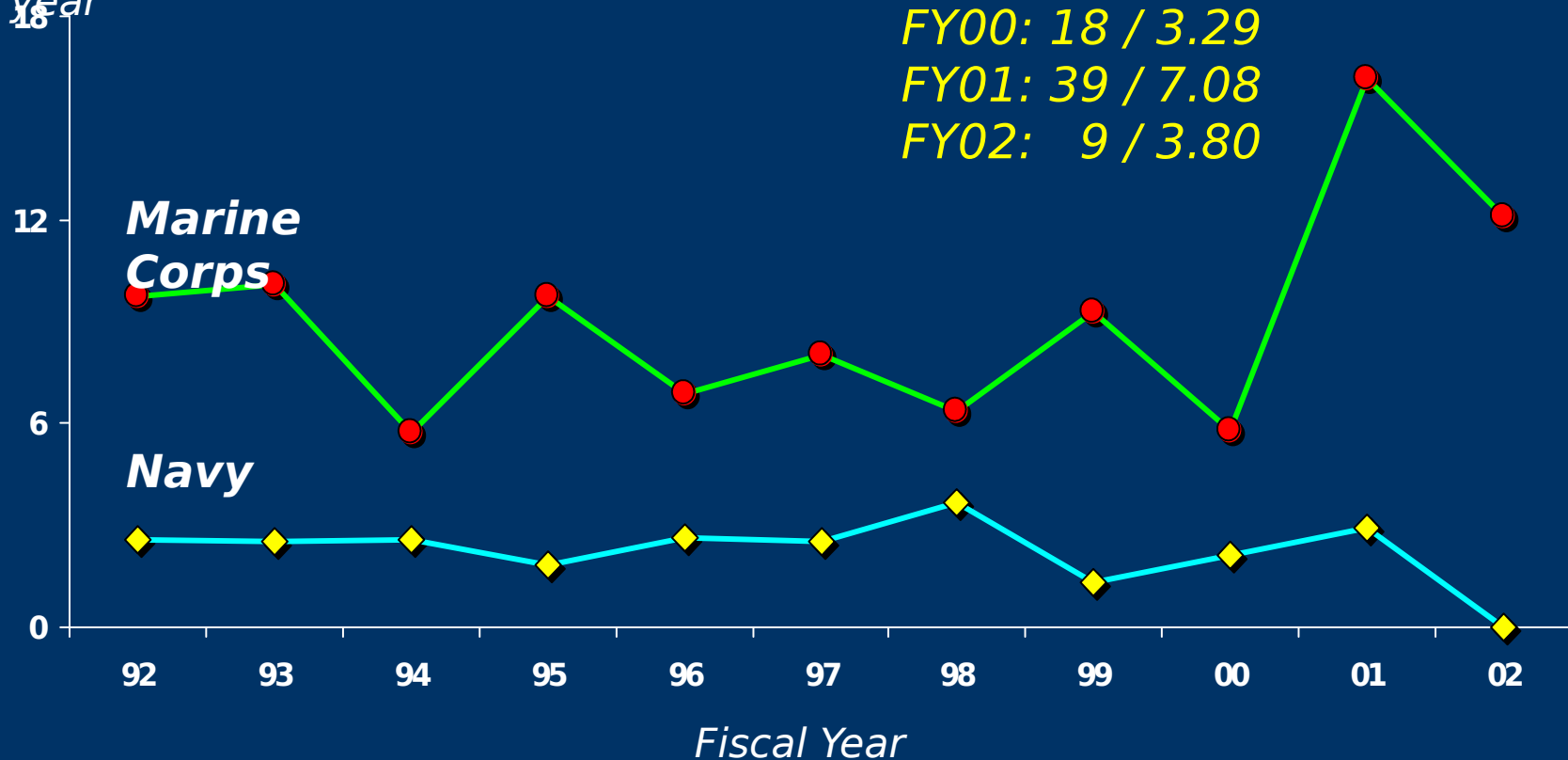


# Class-A Operational Ashore Mishap Rates\*

## Navy and Marine Corps

Mishap rates per 100,000 personnel per year

Navy/Marine  
FY00: 18 / 3.29  
FY01: 39 / 7.08  
FY02: 9 / 3.80



\*As of 5 Mar 02



# Shore

## TRENDS

### Mishap Investigations

- *Lack of headwork*
- *Inadequate supervision*
- *Inexperience*
- *Complacency*
- *Alcohol involvement*
- *Non-use of PPE*

### Surveys

- *Ineffective oversight*
- *Inadequate training*
- *Lack of ORM*
- *Poor command culture*

## TAKEAWAYS

- *Continued leadership commitment*
- *Enforce standards*
- *Improve awareness*
- *Demand risk assessments*
- *Improve safety manning/placement*
- *Increase checks and balances*
- *Institutionalize ORM*
- *Improve training*



# PMV Fatality Rates\*

## Navy and Marine Corps

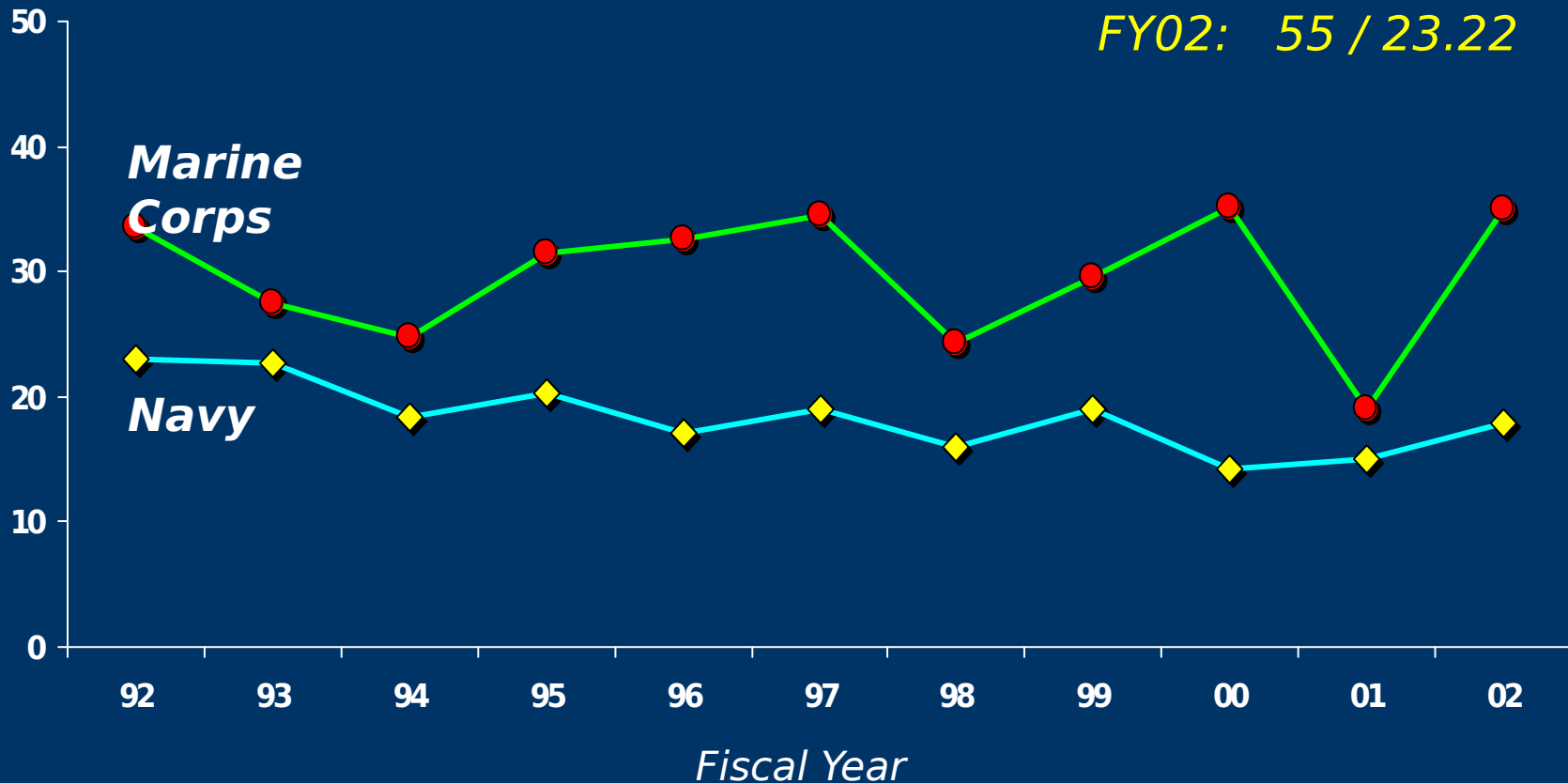
Mishap rates per 100,000 personnel per year

Navy/Marine

FY00: 114 / 20.86

FY01: 90 / 16.34

FY02: 55 / 23.22



\*As of 5 Mar 02



# Perspective

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*“In 1968, we lost 99 American Sailors in USS Scorpion, which we think of as a national disaster; while we lost 103 Sailors and Marines in PMV accidents in 1998, and call it our ‘best year’!”*



# PMV Fatalities by Community

**FY97-02\***

Total: 346 Sailors  
273 Marines

Afloat  
168

Shore  
141

Navy  
Aviation  
37

USMC  
273

**\*As of 5 Mar 02**



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# Fatal Factors in Traffic Deaths

## Navy and Marine Corps, FY99-01

**FY99-01 Deaths:**  
**326**

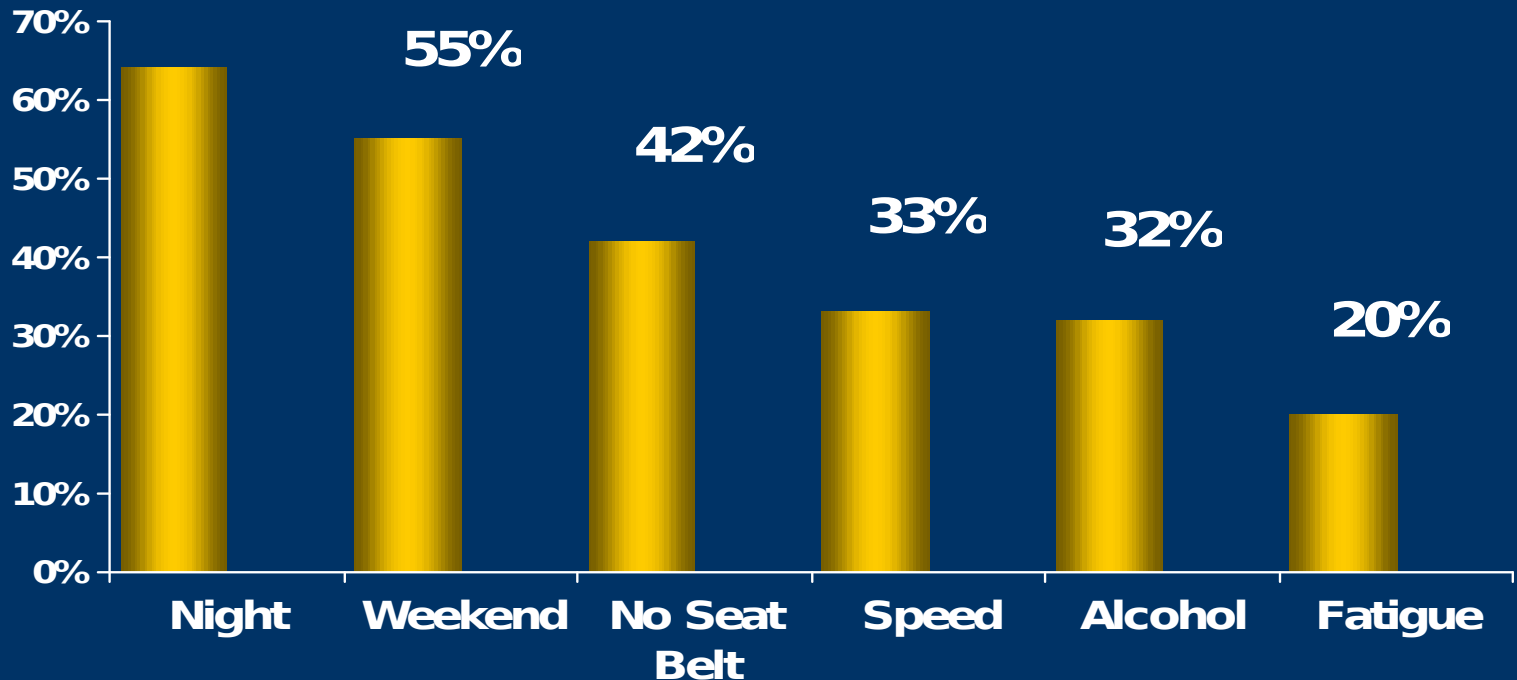
FY99: 122

FY00: 114

FY01: 90  
**64%**

**FY02 Deaths:**  
**55**

*As of 5 Mar 02*





# Present Efforts



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# Traffic Safety

**Risk**

**Education**

**Management**

**Training**

**Enforcement**



## Leadership Commitment



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# Questions?

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